

WIEB - CEC Natural Gas Workshop

Natural Gas Demand

Docket 03-IEP-1

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Goals

1. What is the outlook for natural gas demand for the Western States and Canadian Provinces?
2. More specifically, what is the outlook for natural gas demand for power generation in the Western States and Canadian provinces?
3. Provide a stylized, qualitative assessment of the influence of energy efficiency, conservation, and renewable resource utilization on natural gas demand.

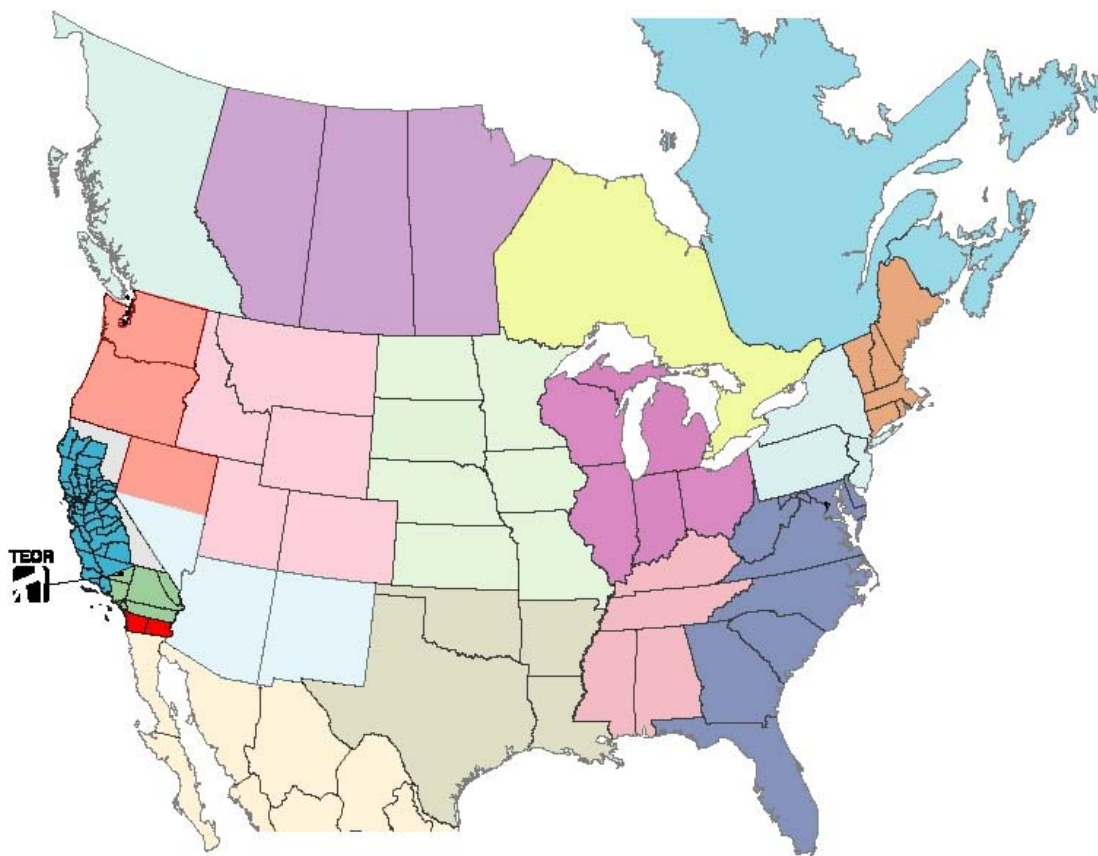


Topics

- **Natural Gas Demand Regions**
- **Natural Gas Demand Categories**
- **Sources for Natural Gas Demand Data**
- **Natural Gas Demand Assumptions in the Base Case**



Natural Gas demand regions in the NARG model





Demand Sectors in NARG

Three demand sectors in the NARG model

- Core — Residential, commercial, transportation, and $\frac{1}{2}$ of industrial natural gas demand;
- Noncore — $\frac{1}{2}$ of industrial natural gas demand and a portion of commercial and industrial oil demand;
- Power Generation — All natural gas and oil demand for electricity generation.



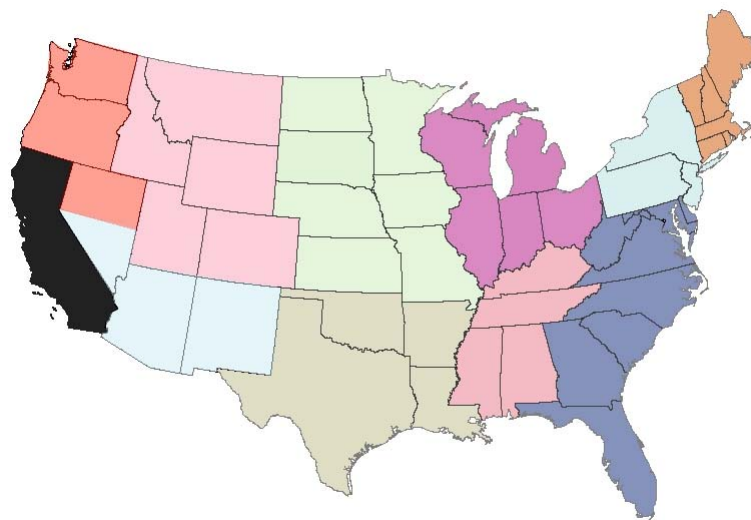
Data Sources — Lower 48 States

Current Source:

EIA — Annual Energy Outlook 2004

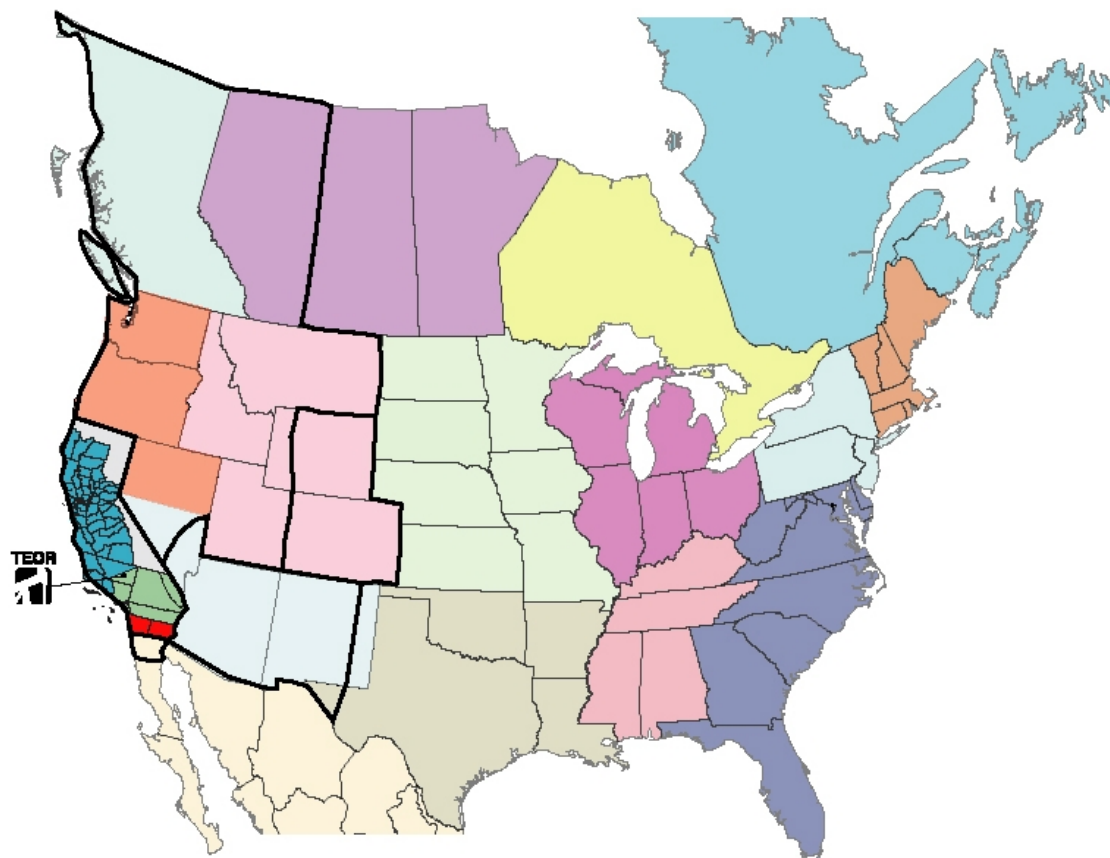
Alternate Sources:

- NPC
- WIEB Members





Data Sources — Power Generation in the WECC



Current Source:

Energy Commission,
Electricity Analysis
Office

Alternate Sources:

- EIA
- NPC
- Northwest Power and Conservation Counsel
- WIEB Members



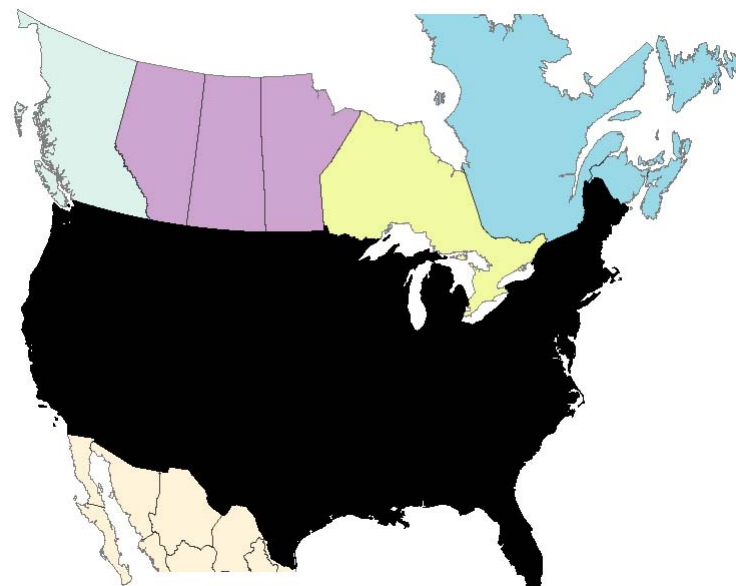
Data Sources — Canada and Mexico

Canada Sources:

- CERI
- NEB
- STATS CAN
- Provincial Governments

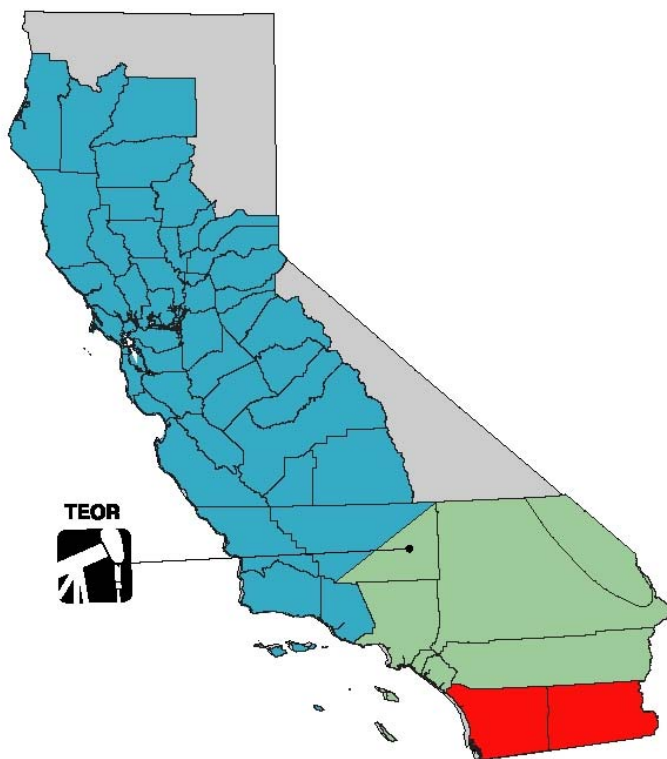
Mexico Sources:

Ministry of Energy





Data Source — California



Data Source:

Energy Commission,
Demand Analysis
Office



Modeling Assumptions — Base Case

- 1-in-2 weather conditions
- 1-in-2 hydro conditions
- Moderate economic growth
- Fuel switching is limited to regions in which it is permitted by local regulations



Questions

- What are the driving forces of natural gas demand for each market sector in the WIEB region?
- What industries have entered or exited (or will enter or exit) the natural gas market?
- Are there any surprises in the regional development of new electricity generation?
- What is the impact of the penetration of alternative fuels for electricity generation (renewable, coal, nuclear, etc.)?